

Remarks

Applicants have read and considered the Advisory Action dated November 14, 2007 and the final Office Action dated September 6, 2007. Claim 1 has now been amended. Claims 1-5 and 7-23 are currently pending. Reconsideration and allowance are respectfully requested.

Claims 1-5 and 7-22 were rejected as being unpatentable over Baumgart et al. The Office Action states that the reference teaches paint for plastic or metallic materials comprising the claimed materials. The Office Action also states that it is the Examiner's position that waxes are inherently dispersed in a solvent. In addition, the Office Action states that the concentrations would have been obvious to one of ordinary skill in the art to optimize the result-effective variables. Further, it is the Examiner's position that the cross-linking involved in the curing of Baumgart is the result of exposure to the UV radiation and that exposure to thermal radiation is part of the curing process, does not contribute to cross-linking. Applicants respectfully disagree and traverse the rejection.

Claim 1 has been amended and now includes features of claim 23, which was allowed. Claim 1 now recites a paint for plastic or metallic materials comprising one or more acrylic-based resins crosslinkable solely by exposure to ultraviolet radiation, the one or more resins comprising a urethane-acrylate oligomer, in a weight percentage of between 30wt% and 60wt%. Claim 1 further recites one or more photo-initiators as sources of free radicals present in an amount ranging between 0.5 wt% and 5.0 wt%, to induce cross-linking of said acrylic resin in the presence of UV radiation, one or more fillers, a dispersion of waxes in solvents for orienting said fillers, wherein at least a portion of the solvents evaporates at a temperature of between 40°C and 60°C. Finally, claim 1 recites levelling additives, and wherein said paint is crosslinkable solely by exposure to ultraviolet (UV) radiation.

Applicants assert that claim 1 patentably distinguishes over Baumgart et al. or any other prior art or combination thereof. Baumgart repetitively emphasizes that the disclosed coatings are curable thermally and with actinic radiation. In fact, Baumgart requires isocyanate-reactive functional groups in the coating components, --the isocyanate-reactive groups being thermally reactive. In particular, Baumgart teaches a coating which is curable thermally and with actinic radiation, comprising (A) at least one binder containing isocyanate-reactive functional groups

and (B) a crosslinking component comprising (i) free and/or blocked isocyanate groups and (ii) reactive functional groups containing at least one bond which can be activated with actinic radiation. Consequently, Baumgart does not teach a paint including an acrylic-based resin crosslinkable solely by exposure to UV radiation.

Furthermore, the office misleadingly characterizes Baumgart's teaching of "curing" by suggesting that only thermal curing is "curing" while curing with actinic radiation is "cross-linking." The differentiation asserted by the Examiner is not found in Baumgart and is otherwise unexplained and unsupported. Furthermore, this does not change the teachings in Baumgart requiring coating materials that are reactive both thermally and with actinic radiation.

Conversely, the present invention describes a paint with one or more acrylic-based resins that are cross-linkable exclusively by exposure to UV radiation. This is a fundamental difference of the present invention as compared to the prior art. Moreover, the processes for cross-linking according to the present invention provide advantages over the prior art. The present invention allows for use of raw materials currently available on the market which has yielded unexpected results by obtaining a pigmented UV single-coat finishing product with excellent mechanical and chemical resistance. With just a single coat, excellent aesthetic and mechanical properties are achieved. This is opposed to known multi-coat systems, wherein aesthetic functions may be applied with one coat but additional coats are required to provide chemical and mechanical protection.

The present invention also overcomes problems related to submission to high thermal stress found with other systems, including Baumgart. Moreover, as recited in claim 1, the flash off period of the present invention is conducted at only 40-60 degrees Celsius in just a few minutes with immediate UV cross-linking. After such exposure, there is no further stress to the coating. Conversely, the Baumgart patent requires a process after application including a long flash off period, cross-linking with actinic radiation and post baking in an oven at higher temperatures for a further period of time. This is a much more complicated and expensive process and places more stress on the coating materials.

The Office Action also states that the relative percentages would be obvious and could be easily optimized as there are no unexpected results. Applicant respectfully asserts that the

present invention does provide surprising results and advantages over the prior art. The choice and type and relative percentage of photo initiators is used with commercially available pigments, which absorb a portion of the energy in the same range as the photo initiators and diminish the efficiency of cross linking. The present invention provides more than a satisfactory degree of cross linking at both in-depth and on the surface of the paint. The present invention also obtains good wettability without the use of wetting additives, which was unexpected and provides non-obvious advantages over the prior art.

Applicants assert that the paint recited in claim 1 has many non-obvious differences and provides advantages over Baumgart and any other prior art or combination thereof. Applicants further assert that the claims depending there from are also allowable for at least the same reasons as well as other advantages. Applicants request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

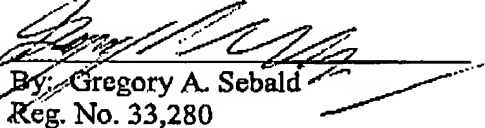
Applicants thank the Examiner for the indication of allowable subject matter. Claim 23 has been designated allowable. As discussed above claim 1 has been amended and incorporates additional features of claim 23. As claim 23 is allowable, Applicants assert that claim 1 and the claims depending from claim 1 are also allowable for similar reasons.

A speedy and favorable Action in the form of a Notice of Allowance is respectfully requested. If a telephone interview would be helpful in this matter, please contact Applicants' Representative at 612.332.5300.

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